

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
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World Health
Organization

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Agenda Item 6.1

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Sixth Session

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REVISED PROPOSED DRAFT STANDARD FOR DRIED ROOTS, RHIZOMES AND BULBS- TURMERIC

(Prepared by the Electronic Working Group chaired by Iran (Islamic Republic of) and co-chaired by India)

BACKGROUND

1. CCSC5 was held virtually (April 2021), agreed to establish an electronic working group (EWG) chaired by Iran and co-hosted by India, working in English, to elaborate the specific requirements for Turmeric based on the concept of group standards i.e. category of "Dried roots, rhizomes and bulbs".
2. The Chair of the EWG provided an overview of the document, noting that some comments received in response to CL 2022/30/OCS-SCH had been addressed and included in the amended draft presented to the meeting.
3. Comments of Canada, Cuba, Egypt, European Union, India, USA, Saudi Arabia, Syrian Arab Republic, IOSTA, Uganda, Malaysia Morocco, Rwanda, Syria were delivered.
4. USA and the American Herbal Products Association, ICUMSA, IOSTA and THIE
5. The EWG agreed to most recommendations, noting some provisions that need to be further considered by the Committee.
6. Appendix I of this document showed amended version of the draft standard, based on deliberations and comments provided by the member countries during virtual working group, with following explanation and decisions:

Scope

7. EWG agreed to retain the text as it is, taking into account that the text already agreed by CCSC5 and it is aligned with the TOR of CCSC and with the template for SCH standards.

Section 2.1

8. Some delegations proposed to add production definition in text (family Zingiberaceae) and delete table 1 and they suggested to consider post-harvest treating and preparation stages. Editorial revised was done.
9. Chair and cochair agreed adding text but basis on codex standard table (1) remained.

Section 2.2

10. One delegation recommended that the definition of Styles in the Codex Standard for Dried Roots, Rhizomes and Bulbs: Dried or Dehydrated Ginger (CXS 343-2021) be used as the products are similar. This advice was don.

Section 3.2

11. One delegation suggested to develop criterias for grading turmeric basis on ISO5562:1983. It was acceptable.

Section 5

12. Some delegations proposed to edit text. it was done.

Section 6

13. One delegation proposed to edit the statement 6.1 and 6.2 basis on other codex standards. Chair and cochair agreed.

Section 8

14. One delegation suggested to put optional for name of product but after studying scientific documents it was clear that there is one common name(turmeric) so EWG disagreed.

Annex I. Table 2

15. One delegation proposed to change table numbering that should be separated from text tables besides recommend having only one Annex with two table. According to codex documents all tables need an individual annex.
16. Some delegations proposed to change values in table 2 which are in brackets for discussion in meeting.

Annex II. Table 3

17. Some delegations proposed to add parameters "Dead whole insects" and "Insect fragments" in table 3. it was done
18. Some delegations suggested to change values in table 3 which are in brackets for discussion in meeting.
19. Some delegations proposed editorial comments that were correct and done.

Annex III. Table4

20. Some delegations recommended to add method of analysis for Table3 parameters. Chair and cochair agreed.
21. One delegation proposed to describe the effective rhizomes basis on ISO 5562. The committee is invited to consider the proposal.

Conclusion

22. The Committee is invited to consider the amended draft standard as presented in Appendix I to this document with the intent to progress it to further step specially the comments for values of Table 2 and 3 need discussion results.

**DRAFT STANDARD FOR DRIED ROOTS, RHIZOMES AND BUBLES- TURMERICDRAFT
(STEP3)**

1 SCOPE

This Standard applies to dried or dehydrated Turmeric as defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing or for repackaging if required. It excludes the product for industrial processing.

2 DESCRIPTION

2.1 Product definition

2.1.1 Dried or dehydrated Turmeric is the product obtained from rhizomes of *Curcuma longa* L. of the Zingiberaceae family (Table 1), having reached appropriate degree of development, harvested and post-harvest treated properly, by undergoing operations such as boiling, polishing, drying, sorting, cutting and/or grinding before the final packaging and are sold in styles as described in 2.2.

Table 1. Common and scientific name of dried Turmeric.

Common Name	Scientific Name
Turmeric	<i>Curcuma longa</i> L.

2.1.2 Whole turmeric is graded according to its presentation (rhizomes, fingers or bulbs), its origin and its extraneous matter content. Fingers, when sold separately, shall not contain more than:7 % (mlm) of pieces (rhizomes of length less than 15 mm and screenings or fragments); and 5 % (pnlm) of bulbs. Ground (powdered) turmeric is graded according to its particle size into two types, as follows: coarse powder: 98 % of the product shall pass through a sieve of aperture size 500 Pm; and fine powder: 98 % of the product shall pass through a sieve of aperture size 300 Fm.

2.2 Styles

Dried or dehydrated Turmeric may be:

- Whole: single or branched rhizomes of varying sizes, which may be cut at both ends with the flattened circular shape intact.
- Pieces: comprising various cut, diced or sliced styles.
- Ground/Powdered.

3 ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Product as described in Section 2 above shall conform to the requirements specified in Annexes I and II.

3.2 Quality factors

3.2.1 Odour, flavour and colour:

The product shall have a characteristic odour, flavour and colour, which can vary depending on geo-climatic factors/conditions, and shall be free from any foreign odour, flavour, and colour especially from rancidity and mustiness.

3.2.2 Chemical and physical characteristics

Dried Turmeric shall comply with the requirements specified in Annex I (Chemical Characteristics - Table 2) and Annex II (Physical Characteristics-Table 3). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

3.2.3 Classification (optional)

When dried Turmeric is traded as classified, the chemical and physical characteristics in Annexes I and II apply as the minimum requirements.

4 FOOD ADDITIVES

4.1. The anticaking agents listed in Table 3 of the General Standard for Food Additives (CXS192-1995) may be permitted for use in ground/powdered Turmeric.

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995), *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78-2017) and other relevant Codex texts.

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969) the *Code of Hygienic Practice for low moisture foods* (CXC 75-2015) Annex III Spices and *Dried Culinary Herbs* and other relevant Codex texts.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria for Foods* (CXC/GL 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CODEX STAN 1-1985). In addition, the following specific provisions apply:

8.2 Name of the Product

8.2.1 The common name of the product shall be as described in Section 2.1

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Trade name, variety or cultivar may be listed on the label.

8.3 Country of origin and country of harvest

8.3.1 Country of origin shall be declared.

8.3.2 Country of harvest (optional)

8.3.3 Region of harvest and year of harvest (optional)

8.4 Labelling of Non-Retail Containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9 METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis

As described in Annex III, Table 4

9.2 Sampling plan

To be developed

Table 2. Chemical Characteristics for Dried or Dehydrated Turmeric

Product	Styles	Moisture Content %w/w (max)	Total Ash on dry basis %w/w (max)	Acid Insoluble Ash on dry basis %w/w (max)	Colouring power (Total curcuminoids) % on dry basis(min)
Turmeric	Whole	12	9 [8]	1.5	2
	Pieces	12	9 [8]	1.5	2
	Ground/ Powdered	10 [12]	9 [10]	1.5 [2]	2 [1.5]

Table 3. Physical Characteristics for Dried or Dehydrated Turmeric

Product	Style	Defective rhizomes ¹ % w/w (max)	Mould visible/Insect defiled/Infested ⁴ %w/w(max)	live insect, count/100g (max)	Insect fragments, count/10g(max)	Dead whole insects, count/100g (max)	Foreign matter ³ %w/w (max)	Extraneous matter ² %w/w (max)	Mammalian and or other excreta, mg/kg (max)
Turmeric	Whole	5	N/A [0] [3]	N/A [0]	N/A [2.5]	3	2	2	2
	Pieces	N/A	N/A [0]	N/A [0]	N/A	3	2	2	2
	Ground/Powdered	N/A	N/A [0]	N/A [0]	N/A	N/A	2	NA [2]	NA

¹ Shriveled fingers and/or bulbs, internally damaged, hollow or porous rhizomes, rhizomes scorched by boiling and other types of damaged rhizomes shall be considered as defective

²Vegetative matter associated with the plant from which the product originates but is not accepted as part of the final product.

³Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc.

⁴Seen by naked eyes. The value shall be divided equally between mould visible and insect defiled/infestation

N/A: Not applicable, means that this form of the above product has not been evaluated for this provision, and currently we do not have values. N/A does not refer to zero

ANNEX III

Table 4. Method of analysis

Parameter	Method [*]	Principle	Type ¹
Moisture content	ISO 939	Distillation	I
Total Ash on dry basis	ISO 939 and ISO 928	Distillation and Gravimetry	I
Acid Insoluble Ash on dry basis	ISO 939 and ISO 930	Distillation and Gravimetry	I
Colouring power (Total curcuminoids) on dry basis	ISO 5566	Spectrophotometry**	IV
Extraneous Matter	ISO 927	Visual Examination followed by Gravimetry	I
Foreign Matter	ISO 927	Visual Examination followed by Gravimetry	I
Dead insect, insect fragments	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices	Visual Examination	IV
Live insect	ISO 927	Visual Examination	I
Mammalian or/and Other excreta	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices ISO 927	Visual Examination	IV
Defective rhizomes	ISO 927	Visual Examination	IV
Mould visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices ISO 927	Visual Examination	IV

*Latest edition or version of the approved methods should be used

** For whole Turmeric preparing sample followed by ISO 2825

¹ According to the definition of “types of method of analysis” as per Codex Procedural Manual Section II